

Claims

1. A prism structure of a integration of a plurality of modulators for modulating color light from a light source and a color combining prism for combining the light modulated by the plurality of modulators, wherein:

light shielding means having an opening in the center is arranged between the modulators and the color combining prism; and

the light shielding means allows image light to pass through the opening and blocks light from the periphery of the image light.

2. The prism structure according to Claim 1, wherein:

a plate optical element is provided between the modulators and the color combining prism; and

the light shielding means is arranged between the plate optical element and the color combining prism.

3. The prism structure according to Claim 2, wherein:

the relationship $d1 < d3 \leq d2$ holds, where $d1$ is the length in at least one of two axial directions perpendicular to the direction of light travel of an image formation area of the modulators, $d2$ is the length in at least one of the directions of the outer shape of the plate optical element, and $d3$ is the length in at least one of the directions of the opening of the light shielding means.

4. The prism structure according to one of Claims 1 to 3, wherein the light shielding means is formed of a frame-shaped plate member.

5. The prism structure according to one of Claims 1 to 3, wherein the light shielding means is formed of a pair of plate members.

6. The prism structure according to Claim 4 or 5, wherein the plate member

has a slit extending from the outer rim toward the opening.

7. The prism structure according to one of Claims 4 to 6, wherein the plate member is joined with the color combining prism.

8. The prism structure according to one of Claims 1 to 3, wherein the light shielding means is a light shielding layer provided on the incident plane of the color combining prism.

9. The projector comprising a plurality of modulators for modulating a plurality of colors of light, respectively, a color combining prism for combining the light modulated by the plurality of modulators, and a projector lens for projecting the light combined by the color combining prism, wherein:

light shielding means having an opening in the center is arranged between the modulators and the color combining prism; and

the light shielding means allows image light to pass through the opening and blocks light from the periphery of the image light.

10. The projector according to Claim 9, wherein a prism structure is wherein:

a plate optical element is provided between the modulators and the color combining prism; and

the light shielding means is arranged between the plate optical element and the color combining prism.

11. The prism structure according to Claim 10, wherein:

the relationship $d1 < d3 \leq d2$ holds, where $d1$ is the length in at least one of two axial directions perpendicular to the direction of light travel of an image formation area of the modulators, $d2$ is the length in at least one of the directions of the outer shape of the plate optical element, and $d3$ is the length in at least one of the

directions of the opening of the light shielding means.

12. The projector according to one of Claims 9 to 11, wherein the light shielding means is made of a frame-shaped plate member.

13. The prism structure according to one of Claims 9 to 11, wherein the projector includes the light shielding means made of a pair of plate members.

14. The projector according to Claim 12 or 13, wherein the plate member has a slit extending from the outer rim toward the opening.

15. The projector according to one of Claims 12 to 14, wherein the plate member is joined with the color combining prism.

16. The projector according to one of Claims 9 to 11, wherein the light shielding means is a light shielding layer provided on the incident plane of the color combining prism.